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RF Exposure Exhibit

EUT Name: Wireless Audio Headset

EUT Model: Stealth600X-USB-RX

PMN: Stealth600X-USB-RX

HVIN: 600X-USB-RX

CFR47 Part 2.1093, RSS-102 Iss. 5 March 2015

Prepared for:

Voyetra Turtle Beach Inc.
44 South Broadway, 4th Floor
White Plains NY 10601 USA

Prepared by:

TUV Rheinland of North America
1279 Quarry Lane, Ste. A
Pleasanton, CA 94566
Tel: (929) 249-9123
Fax: (925) 249-9124
<http://www.tuv.com/>

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1.1 Maximum Permissible Exposure

1.1.1 Test Methodology

In this section, we try to prove the safety of radiation harmfulness to the human body for our product. The KDB 447498 D01v06 General RF Exposure Guidance is followed. The Gain of the antenna used in this calculation is declared by the manufacturer, and the maximum average power input to the antenna is measured. Using the general SAR test exclusion guidance in Section 4.3 of KDB 447498, we show the device meeting the SAR exclusion threshold found in Appendix A of KDB 447498 D01v06 and SAR exemption limits found in Table 1 of RSS-102 Issue 5.

ISED accepts the KDB 447498 D01 Procedure.

1.1.2 FCC KDB 447498 D01 – General SAR Test Exclusion Guidance

The SAR exclusion threshold conditions are listed:

- 1) The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$$\text{Exclusion Threshold} = [P / d] * [\sqrt{f}]$$

Where

P = max power of channel (including tune-up tolerance) in mW

d = min. test separation distance in mm

f = the RF channel transmit frequency in GHz

Power and distance are rounded to the nearest mW and mm before calculation

The result is rounded to one decimal place for comparison

Limit: ≤ 3.0 of 1-g SAR ≤ 7.5 of 10-g extremity SAR

The test exclusions are applicable only when the minimum test separation distance is < 50 mm for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR exclusion.

1.1.3 EUT Operating Condition

The software provided by Manufacturer enabled the EUT to transmit data at lowest, middle and highest channel individually.

1.1.4 Classification

The antenna of the product, under normal use conditions, is 2 cm away from the body of the user. This device is classified as a **Portable Device**.

1.1.5 Antenna Gain

Number	Antenna Type	Description	Max Gain (dBi)
DTS Antenna	PIFA (PCB Trace)	Max. peak gain at 2.4 GHz	+2.7

1.1.6 SAR Test Exclusion Threshold

FCC SAR Exclusion Threshold Calculation

Mode	Frequency (GHz)	Max. Power (dBm)	Max. Power (mW)	Ant. Gain (dbi)	Min. Distance (mm)	Max. EIRP (mW)	SAR Excl. Threshold (mW)	Result
DTS	2.4	4.12	2.58	2.7	20	4.80	≤ 38.0	Exempted *
Note: 1. Since the EUT can operate at a distance of 20 mm, the SAR Test Exclusion Threshold was taken from KDB 447498 D01 General RF Exposure Guidance v06 Appendix A. 2. The maximum output power was taken from Table 2 of "Turtle Beach Stealth 600X USB RX - FCC 15.247 Report". 3. Nerve Stimulation Exposure does not apply since the EUT only operates in the 2.4 GHz band. 4. (*) The maximum eirp power is less than the SAR exclusion thresholds. Therefore, the EUT is SAR exempted for routine evaluation.								

RSS-102 SAR Exclusion Threshold Calculation

Mode	Frequency (GHz)	Max. Power (dBm)	Max. Power (mW)	Ant. Gain (dbi)	Min. Distance (mm)	Max. EIRP (mW)	SAR Exemption Limit (mW)	Result
DTS	2.4	4.12	2.58	2.7	20	4.80	≤ 30.0	Exempted *
Note: 1. The SAR Exemption Limit was taken from RSS-102 Iss. 5, Sect. 2.5.1 Table 1 for a device operating at a 20 mm distance. 2. The maximum output power was taken from Table 2 of "Turtle Beach Stealth 600X USB RX - FCC 15.247 Report". 3. (*) The maximum eirp power is less than the SAR exemption limit. Therefore, the EUT is SAR exempted for routine SAR evaluation. 4. RSS-102 Nerve Stimulation Exposure does not apply since the EUT only operates in the 2.4 GHz band.								